

LEONI TOWNSHIP OFFICE
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RECEIVED
MICH DEPT OF ENVIRONMENTAL QUALITY

November 16, 2009

NOV 20 2009

WATER BUREAU
LANSING

Mr. Matt Campbell
Septage Waste Program Coordinator
MDEQ – Water Bureau
Constitution Hall, Second Floor – North
P.O. Box 30273
Lansing, MI 48909-7773

Re: Septage Receiving Operating Plan
Leoni Township, Jackson County, Michigan


Dear Mr. Campbell:

Attached please find the revised Leoni Township Septage Receiving Facility Operating Plan. This plan has been revised to reflect changes that have occurred since the plan was approved in 2006.

1. The rate charged to haulers was increased from \$75.00/1000gallons to \$100.00/1000 gallons as part of the funding plan for the new Leoni Township Wastewater Treatment Plant and reflects the cost of treatment as determined by the Leoni Township Financial Advisors, Bendzinski and Company.
2. The hours of operation have been extended to better accommodate the haulers. Normal operating hours were extended from 4:00 PM to 8:00 PM.
3. Hydraulic and organic loading evaluation has been adjusted based on additional data that has been developed since the previous approval.

We hope that this submission is acceptable. Please contact Thomas High at (517)522-8446 with comments or concerns.

Thank You


Michele Manke
Leoni Township Clerk

LEONI TOWNSHIP SEPTAGE RECEIVING FACILITY
OPERATING PLAN

1.1 General Description of the System

The septage receiving station is located at the site of the Leoni Township Wastewater Treatment Plant (WWTP), 8401 Page Avenue, Michigan Center, Michigan. Leoni Township currently receives septage waste at this site and will continue to receive septage waste at this site in accordance with this operating plan.

Septage received at the site is discharged from the haulers through the usage of an offloading pipe connected to a mechanical screening device. Septage haulers connect to the offloading pipe through the usage of a quick-connect fitting. Once connected to the offloading pipe the septage haulers may discharge into the septage receiving system. Flows from the haulers are recorded through the usage of a flow meter located prior to a mechanical screening device. The mechanical screen is designed for a flow rate of 400 gallons per minute which allow haulers to offload in 4-6 minutes depending on the size of the truck. Following screening, the septage flows into a pump station from which it is either blended into the WWTP influent wastewater or sent to a large holding tank for equalization and/or testing.

1.2 Contact Information

Operations of the Leoni Township WWTP are overseen by the contract operations firm Infrastructure Alternatives. Contact information for the plant superintendent is included below:

Tom High, Superintendent
Leoni Township WWTP
(517) 522-8445

1.3 Service Area

The mandated service area for the Leoni Township Septage Receiving Station is the entire County of Jackson. Jackson County Ordinance No. 10 – Septage Waste Disposal Ordinance states that all septage waste collected in Jackson County by a licensed septage waste servicer shall be disposed of at the Leoni Township Waste Treatment Facility or other public septage waste disposal facility located in Jackson County.

In addition to the mandated service area defined above, Leoni Township's service area includes any areas outside of Jackson County that are within 15 radial miles of the receiving facility in accordance with Part 117 of the Natural Resources and Environmental Protection Act, 1994 PA.

1.4 Septage Categories

There are three general categories of septage that receiving facilities may accept for treatment. Those categories can be described generally as follows:

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1. Domestic Septage – the septage pumped from home septic tanks, recreational vehicles (RV), cesspool, portable toilet, type III marine sanitation device, or similar treatment works that receives only domestic sewage.
2. Domestic Treatment Plant Septage (solids) – means biosolids generated during treatment of domestic sewage in a treatment works and transported to a receiving facility or managed in accordance with a residuals management program approved by the Michigan Department of Environmental Quality.
3. Food Establishment Septage – material pumped from a grease interceptor, grease trap, or other appurtenance used to retain grease or other fatty substances contained in restaurant wastes and that is blended into a uniform mixture, consisting of not more than 1 part of that restaurant-derived material per 3 parts of domestic septage, prior to land application or disposed of at a receiving facility.

The Leoni Township facility only accepts domestic septage. Any load suspected of being another category shall be isolated in the sludge storage tank for testing. Loads found to be food establishment septage, domestic treatment plant septage, or containing any waste in violation of the sewer use ordinance shall be denied acceptance and the operator of the receiving station shall take necessary actions with the septage hauler responsible for the load to remove the waste and prevent further violations.

1.5 Hours of Operation

Normal operating hours for the septage receiving station are 7:00am to 8:00pm on Monday thru Friday. At the discretion of Leoni Township, loads may also be received on weekends or after regular business hours on an on-call basis. Haulers are provided with a list of the on-call personnel phone numbers and the dates the employees cover.

1.6 Fee Structure

The general fee structure for the septage receiving station is \$0.10 per gallon or \$100.00 per 1000 gallons. Additional fees apply for deliveries made after hours or on weekends. A \$15.00 per load fee is charged for after hours and Saturday deliveries, \$25.00 per load for Sunday deliveries, and \$35.00 per load for holiday deliveries. Billing for the loads is performed twice a month on the 1st and 16th.

1.7 Treatment of Septage

Septage accepted at the receiving station is blended with the domestic wastewater and discharged to the Leoni Township Wastewater Treatment Plant. The WWTP is presently operating under a State of Michigan Department of Environmental Quality Surface Water Discharge Permit. This permit authorizes the discharge from the treatment facility to the surface waters of the state, provided that the permit effluent limitations, monitoring requirements and other conditions are complied with. The current permit expiration date is October 2012.

1.8 Hydraulic and Organic Loading Capacity

The impact of the septage loading on the ability of the WWTP to meet the existing permit conditions needs to be considered when accepting waste. A brief summary of this evaluation is included on the following page.

1.8.1 Hydraulic Loading

The average septage discharge to the WWTP for the years 2003 through 2009 is 12,728 gallons per day, or 0.0128 million gallons per day (MGD). The design hydraulic capacity for the Leoni Township WWTP is 2.6 MGD. Based on this information, average septage flow represents approximately 0.48% of the hydraulic capacity of the plant. Influent flow to the WWTP is currently averaging approximately 2.0 MGD or 76% of design capacity

Current influent flow measurements at the WWTP show that the average daily flow and peak monthly flow for 2008-2009 are 2.00 MGD and 2.46 MGD, respectively. Additionally, construction is currently underway on an expansion project at the Leoni Township WWTP that will increase capacity of the facility to 3.0 MGD. Construction of the new facility should be completed in June 2010. Based on evaluation of existing and projected flows, Leoni Township should be able to accommodate all hydraulic loading, including the septage flows, throughout the interim period until the new plant is online.

During the past three years, the Leoni Township WWTP has experienced I/I related flow increases during the months of February through May. Leoni Township is evaluating and correcting identified sources of increased flow. Through a combination of I/I elimination and WWTP operational adjustments, the increased flows will not impede acceptance of septage until the new WWTP is operational. There is no history of combined sewer overflows (CSO) and/or sanitary sewer overflows (SSO) at the Leoni Township WWTP.

1.8.2. Organic Loading

Based on samples of the septage analyzed during the period 2006 through 2009, the BOD loading varies widely. However utilizing this data, the average BOD loading was calculated to be 4,499 mg/l. Using this information and the average septage flow of 12,728 gpd, the average daily organic loading was calculated to be approximately 477.6 lb/day. The design hydraulic capacity for the Leoni Township WWTP is 3903 lb/day. Based on this information, average septage flows represent approximately 12.2% of the organic capacity of the plant. Evaluation of BOD removal through the current treatment plant indicates that the WWTP is capable of accepting this BOD loading. There have been no NPDES Permit violations for BOD that are related to excessive BOD loading. The only recorded BOD violations are related to cold water temperatures during the early spring.

loading?

The new WWTP currently under construction for Leoni Township will have a design BOD Loading of 8,081 pounds per day. The septage loading will be 5.9% of the design capacity of the new WWTP.

1.9 Septage Receiving Restrictions

While it is the intention of Leoni Township to maintain septage acceptance

throughout the interim period until the WWTP expansion project is complete, careful attention will be paid to the organic loading of the facility. In the event of a violation of the BOD discharge limit, the organic loading should be reevaluated.



STATE OF MICHIGAN

DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT

JENNIFER M. GRANHOLM
GOVERNOR

LANSING

REBECCA A. HUMPHRIES
DIRECTOR

January 19, 2010

Ms. Michele Manke
Leoni Township Clerk
913 Fifth Street
Michigan Center, Michigan 49254

Dear Ms. Manke:

SUBJECT: Septage Receiving Facility Operating Plan Amendment
Leoni Township Septage Waste Receiving Facility

The Department of Natural Resources and Environment (DNRE), Water Bureau, Drinking Water and Environmental Health Section, On-Site Wastewater Unit, review of the amended Leoni Township Septage Waste Receiving Facility (SWRF) operating plan is complete. Section 11715b of Part 117, Septage Waste Servicers, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, requires review and approval of SWRF operating plans.

The amended operating plan is approved. However, the reference to "hydraulic" in the sentence found in 1.8.2 Organic Loading that reads "The design hydraulic capacity for the Leoni Township WWTP is 3903 lb/day" should be changed to "organic."

The receiving facility must operate in accordance with the approved plan. If a change in operations or conditions is anticipated, please file an amendment to the plan at least thirty (30) days prior to the proposed date for implementation.

Thank you for your continued environmental stewardship and service to those with on-site septic systems in and around your community and those who service them. If you have any questions regarding this matter, please contact me.

Sincerely,

Matthew Campbell
Septage Waste Program Coordinator
On-Site Wastewater Unit
Drinking Water and Environmental Health Section
Water Bureau
517-335-4178

mcc:ckp

cc: Mr. Steve Hall, Jackson County Health Department
Mr. Jon Russell, DNRE